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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,261	07/15/2005	Vincent Gerat	15136NP	3464

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EXAMINER	
FIGUEROA, JAIME	
ART UNIT	PAPER NUMBER
4193	

MAIL DATE	DELIVERY MODE
12/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,261	GERAT ET AL.	
	Examiner	Art Unit	
	JAIME FIGUEROA	4193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07/15/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/15/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 6, 7, 8 , 9, 10, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Onoue (US 6,208,104).

Regarding claim 1, Onoue discloses a multi-axis robot (600) comprising an arm (614-615-616) for moving a tool in space and actuate by electric motors (617) (Figure 2) and a control system comprising:

- A controller (100) which includes at least one power module (508) for supplying said motors (617) and at least one calculation and processing unit (CPU 504) used in particular to compute the path of the arm (614-615-616) and generate control signals for said modules,

-link means between said arm, said power module and said unit used at least to supply said motors from said module (Annotated Figure 3), characterized:

- in that said link means comprise a set of one or more structural buses (B1 601,B2 400-520), (Annotated Fig. 3) linking a control unit (Inherent to CPU 504) associated with said calculation and processing unit (CPU 504), on the one hand, to said module (508) and, on the other hand, to at least one digital interface (503) with at least one position sensor (618) on said arm (614-615-616), and

- in that this assembly forms a single functional bus (Fig. 3: See below) enabling said module to be controlled by said calculation unit and feedback signals to be transmitted from said arm to said unit and/or said power module, at the frequency of the single functional bus.

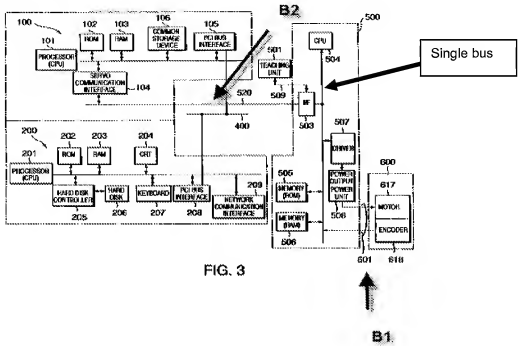

FIG. 3

Regarding claim 2, Onoue discloses the robot characterized in that said single functional bus is divided into at least two structural buses (B1 601, B2 400-520) linking, for the first (B1 601), said control unit (Inherent to CPU 504) to said module (508) and, for the second (B2 400-520) or subsequent buses, said control unit to said interface (503).

Regarding claim 6 , Onoue discloses the robot characterized in that said control unit (inherent to CPU 504) is incorporated in said calculation and processing unit (CPU 504).(Annotated Fig.3)

Regarding claim 7, Onoue discloses the robot characterized in that it comprises an identification and calibration card (501) incorporated in said functional bus (Annotated Figure 3).

Regarding claim 8, Onanue discloses that the or each structural bus (B1,B2) is designed to be extended by additional connection means to interact with at least one external unit processing information (Fig. 5: 300 or Fig. 6: 300).

Regarding claim 9, Onoue discloses the robot characterized in that said link means also comprise a power conductor (601A) linking said module or modules (508) to said arm (614-615-616), independently of said functional bus (Annotated Figure 3).

Regarding claim 10, Onoue discloses the robot characterized in that said first structural bus (B1 601) is connected directly or indirectly to power modules (508), each dedicated to a motor of said robot (600).

Regarding claim 11 ,Onoue discloses the robot characterized in that said digital interface is an interface card (503) for computing the speed and/or the acceleration of the movement measured by the or each associated sensor (618), serializing its output signal and, where appropriate, digitizing the output signals of said sensor or sensors when they are analog.

Regarding claim 13 , Onoue discloses the robot characterized in that said interface (503) is placed at the foot of the arm (Figure 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onoue (US 6,208,104).

Regarding claim 3, while Onoue is silent to said first structural bus is a metallic bus particularly made of copper, it is obvious and well known in the art that buses can be made of copper. Examiner is taking official notice that is well known in the art that buses can be made of copper. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize copper buses in the robot control unit of Onoue, since such a modification would have allowed for greater conductivity.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onoue (US 6,208,104) in view of Müller (US 4,794,513). Onoue fails to teach that said second structural bus is an optical fiber bus (B2).

However, Müller teaches a second structural bus (B2) is a lightguide bus (optical fiber bus). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the lightguide bus (optical fiber bus) of Müller with the robot control unit of Onoue, since such modification would have allowed for greater conductivity.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onoue (US 6,208,104). Onoue is silent to said control unit (Inherent to CPU 504) being linked to said calculation and processing unit (CPU 504) by a PCI type bus.

However, Onoue discloses the use of a multiple PCI type bus connections between elements 101 and 400, as per col. 7, lines 35-37 and col. 9, lines 62-63. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a PCI type bus between the control unit (Inherent to CPU 504) and said calculation and processing unit (CPU 504), since such a modification would have allowed the ability to carry out a input-output function to multiple storage devices.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onoue (US 6,208,104) in view of Niedermayr (US 4,611,296). Onanue fails to teach the interface (503) being incorporated in the associated sensor (618), as well as for computing the speed and the acceleration of the movement measured by said sensor (618), serializing its output signal and, where appropriate, digitizing the output signal of said sensor when it is analog.

However Niedemayr teaches the interface (A/D) is incorporated in the associated sensor (PSI) and is for computing the speed and the acceleration of the movement measured by said sensor, serializing its output signal and, where appropriate, digitizing the output signal of said sensor when it is analog. (Figure 4,5,6). It would have been obvious to one having ordinary skill in the art to incorporate the interface in the associated sensor, as taught by Niedermayr, with the robot control means of Onoue, since such modification would have been to make the device more efficient and reliable. Therefore, it would have been obvious to modify the invention to Onanue as specified in claim 12.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAIME FIGUEROA whose telephone number is (571)270-7620. The examiner can normally be reached on Monday thru Friday , 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 571-272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Derris H Banks/
Supervisory Patent Examiner, Art Unit 3725

/J. F./
Examiner, Art Unit 4193